

BEST AVAILABLE COPY

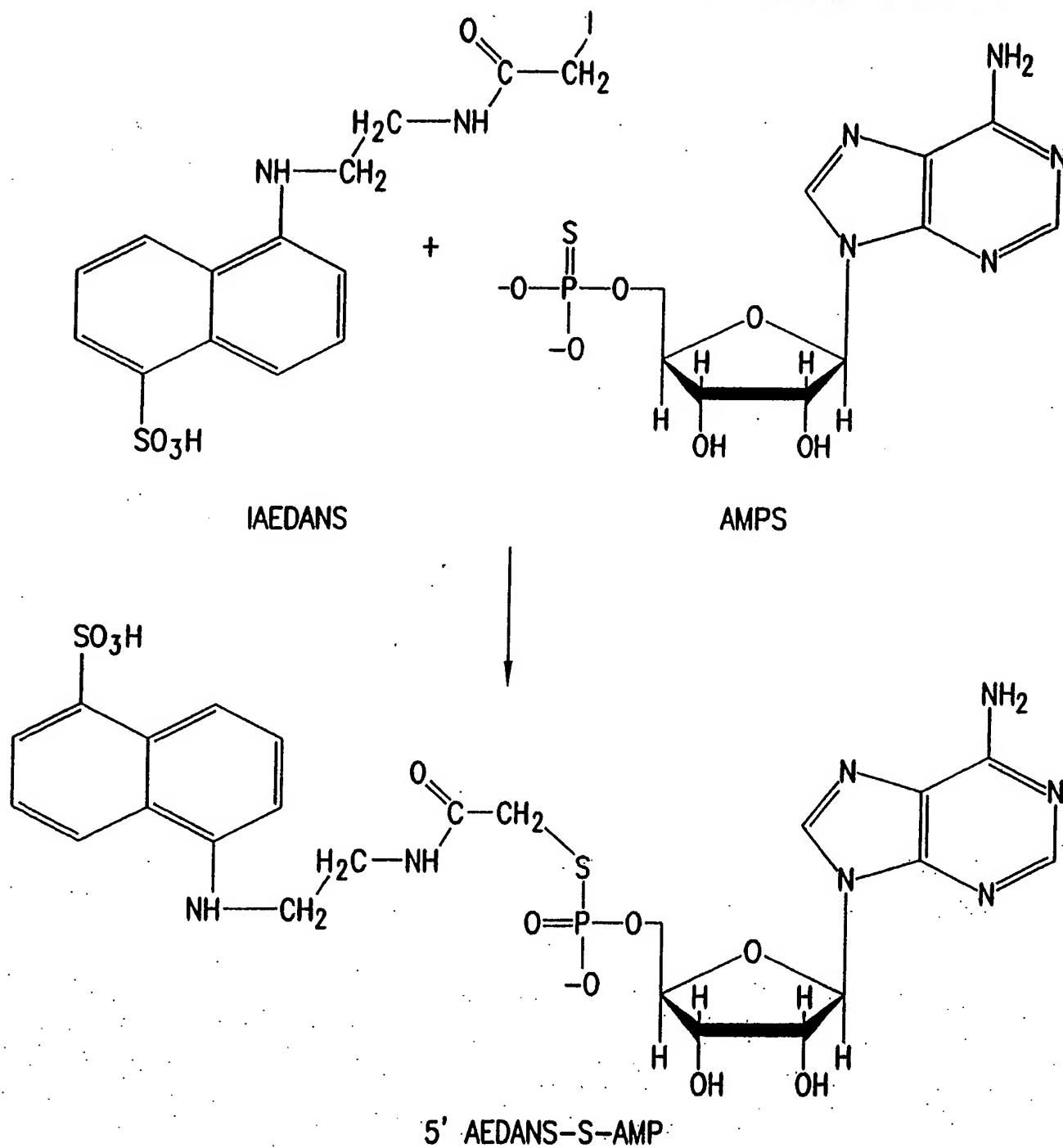


FIG.3

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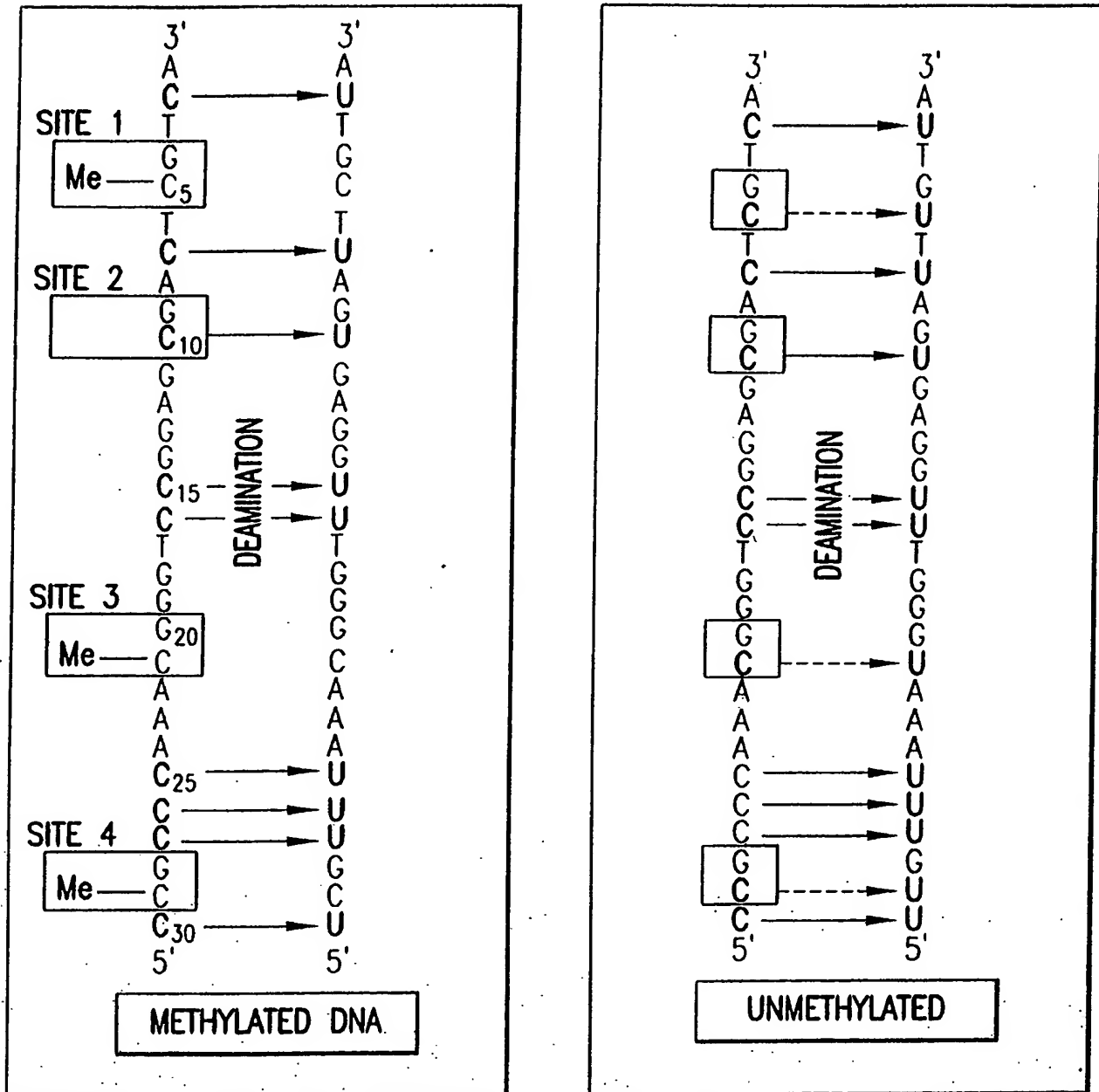
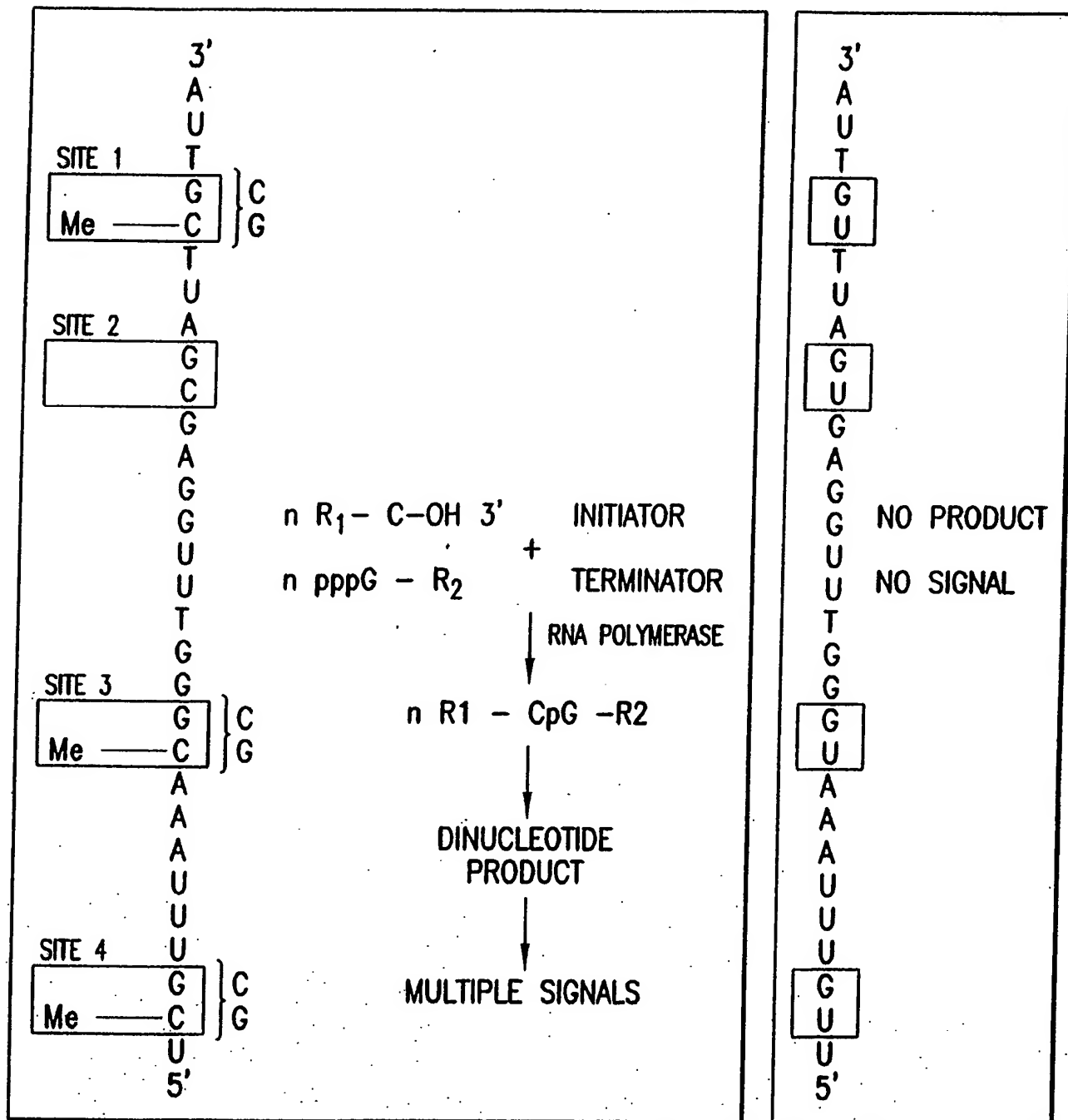


FIG.13

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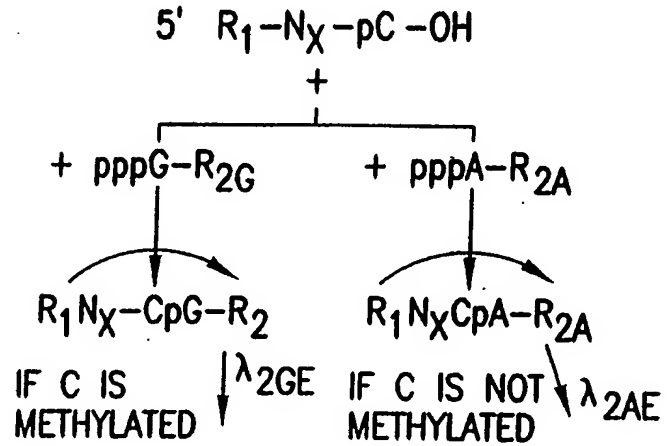
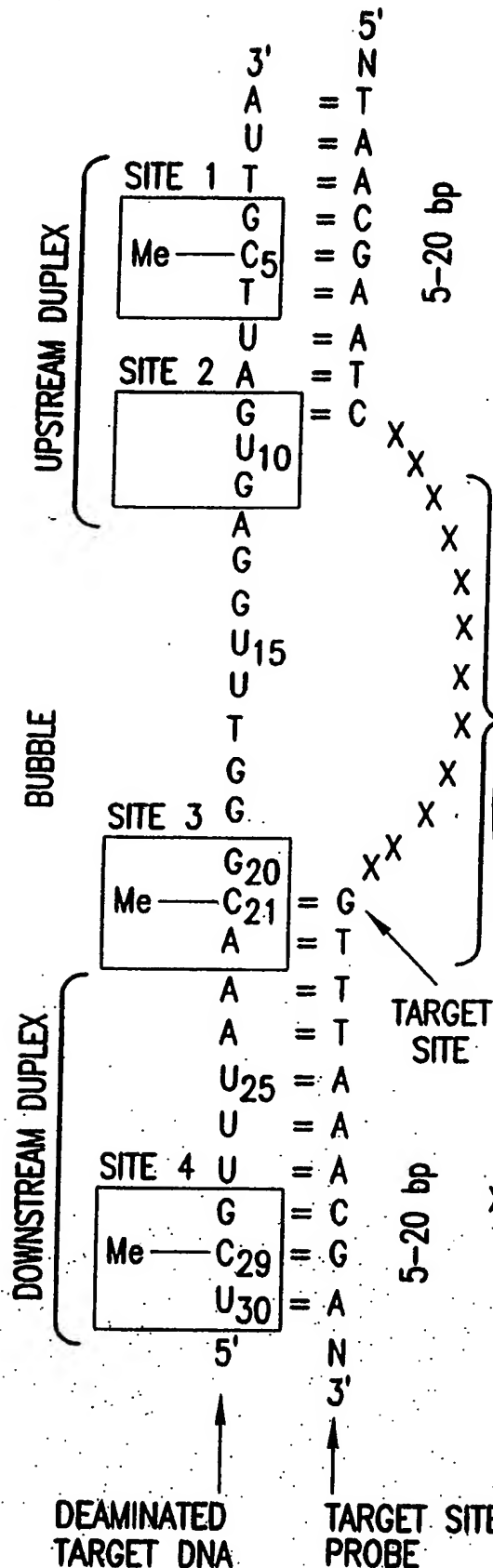


DEAMINATED METHYLATED DNA

DEAMINATED  
 UNMETHYLATED  
 DNA

FIG.14

# BEST AVAILABLE COPY



M=1 IF BOTH COPIES ARE 100% METHYLATED: ONLY  $\lambda_{2GE}$  DETECTED  
 M=0.5 IF 1 COPY IS METHYLATED: BOTH  $\lambda_{2GE}$  AND  $\lambda_{2AE}$  DETECTED  
 M=0 IF BOTH COPIES UNMETHYLATED: ONLY  $\lambda_{2AE}$  DETECTED

$$\text{M=METHYLATION INDEX} = \frac{E\lambda_{2GE}}{E\lambda_{2GE} + E\lambda_{2GA}}$$

X=NON BASE-PAIRED NUCLEOTIDES  
 -BUBBLE IS 8-14 nt LONG

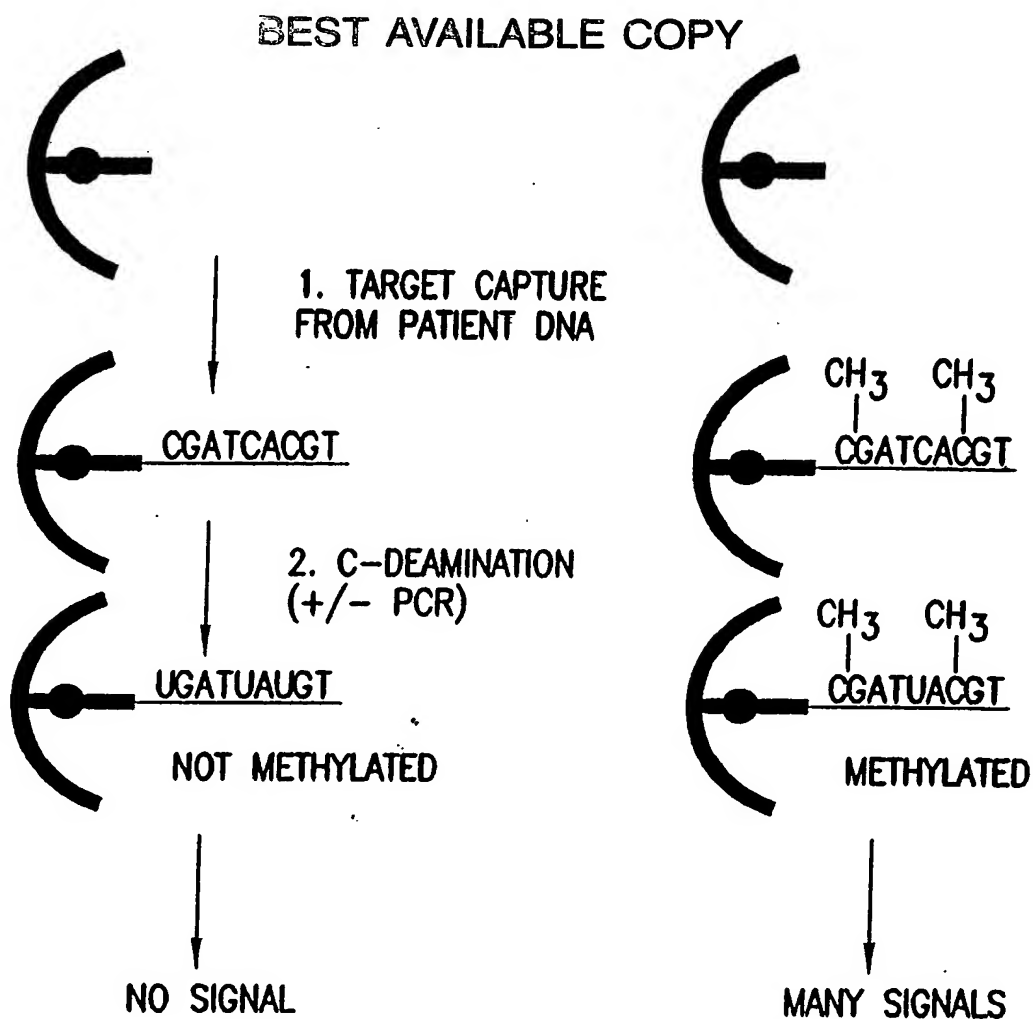
FIG. 15

**FIG. 29A**

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GGTGTATGTTGGAATAAATATCGAATATAAATTTTGATCGAAATTATTCAGAAGCGGCCGGGCGCGGTGCCTC  
ACGCCTTGTAATCCCTTCACTTTGGGAGATCAAGGCGGGGGAATCACCTGAGGTCGGGAGTTCGAGACCA  
GCCTGGCCAACAGGTGAAACCTCGCCTCTACTAAAAATACAAAAGTAGCCGGGGGTGGTGGCAGGCGCCT  
GTAATCCCAGCTACTCGGGAGGTTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCTGAGGTTGTAGTGAAC  
AGCGAGATGGAGCCACTTCACTCCAGCCTGGGTGACAGAGTGAGACTTTGTCGAAAGAAAGAAAGAGAGAA  
AGAGAGAGAGAAAAATTATTCAGAAGCAACTACATATTGTGTTTATTTTAACTGAGTAGGGCAAATAAATATA  
TGTTTGCTGTAGGAACCTTAGGAAATAATGAGCCACATTCATGTGATCATTCCAGAGGTAATATGTAGTTACCAT  
TTTGGGAATATCTGCTAACATTTTGTCTTTTTACTATCTTTAGCTTACTTGATATAGTTTATTTGTGATAAGAG  
TTTTCAATTCTCATTTTTTGAACAGAGGTGTTTCTCCTCTCCCTACTCCTGTTTTGTGAGGGAGTTAGGGGAG  
GATTTAAAAGTAATTAATACATGGGTAACCTTAGCATCTCTAAAATTTTGCCAACAGCTTGAACCCGGGAGTTTG  
GCTTTGTAGTCCTACAATATCTTAGAAGAGAGCTTATTTGTTTAAAAACAAAAAGGAAAAAGAAAAGTGGATAG  
TTTTGACAATTTTAAATGGAG

FIG. 29B



**FIG. 30**